SALTON SEA UNIT 6

CURE DATA REQUESTS SET THREE (# 237 – 275)

AIR QUALITY

Background

The AFC states that the ISCST3 model, Version 02035, was used for assessing short-term and annual concentrations. However, the ISCST3 model output files indicate that the dispersion modeling was conducted using an older version of the model. The AFC modeling was conducted using the BEE-Line ISCST3 "BEEST" Version 8.50, which contains Version 00101 of the ISCST3 model. As noted in EPA Model Change Bulletin #9, there were several changes to the ISCST3 model between Versions 00101 and 02035 which could affect modeled results. Most importantly, MCB#9 includes a modification to address a potential problem that may occur for cases when the receptor elevation is below the stack base elevation. In these cases the mixing height (ZI), which is terrain-following, may drop below the plume centerline height (HE), which is horizontal, resulting in anomalously large (or small) concentrations. When the HE>ZI option is specified on the CO MODELOPT card, the model limits the plume centerline height (HE) to be less than or equal to the mixing height (ZI) when calculating the Vertical Term. The model also generates informational messages that identify when this adjustment has been made. For this project, the ISCST3 model noted 86,690 cases identified with HE > ZI over the five year modeling period for the construction PM10 modeling alone. The high number of cases calls into question the validity of the dispersion modeling analysis given the use of an older version of the ISCST3 model where this error has not been corrected.

Data Request

237. Please revise the dispersion modeling analysis using the correct version of ISCST to address this issue, as well as the issues discussed below associated with the emissions database, meteorological data and dispersion modeling methodology.

Background

The validity of the air dispersion modeling depends on the validity of the meteorological data used. The preparation of a representative meteorological data set can be a challenge in rural areas where the spacing between meteorological monitoring stations is relatively large. This was clearly the case for this project. Unfortunately, there are numerous problems associated with the meteorological dataset as summarized below:

Data Recovery

The AFC has assembled a meteorological dataset based on surface meteorological data from Imperial County Airport and upper air data from Tucson Arizona for the period of 1995-1999. Valid data recovery for the surface meteorological data exceeded a minimum standard of 90 percent for most parameters and years except for wind speed and direction in 1987 and 1988, and cloud cover in 1996. However, valid data recovery for upper data fell well short of 90 percent for all years. In addition, 8,140 of the hours in the meteorological database have been defined as “calm”, which reduces the amount of valid data by about 19 percent. EPA guidance requires either one year of onsite meteorological data, or five years of representative data that has been collected offsite, which is what the AFC attempted. However, the five years of meteorological data do not meet the EPA standard of 90 percent valid data. Therefore, the meteorological dataset developed for the dispersion modeling does not meet EPA requirements.

Wind Speed Conversion

There seems to be an unusual anomaly associated with the wind speeds in the meteorological data that was used in the dispersion modeling. The PCRAMMET program was used by the AFC to process the meteorological data. PCRAMMET uses the following FORTRAN code to convert the wind speed from knots to meters per second (m/s):

```
WSPEED(IHR) = WSPEED(IHR)*0.51444
```

This code simply converts the wind speed for each hour (IHR or integer hour) from knots to m/s by multiplying the wind speed in knots by a factor of 0.51444.

The AFC’s processed wind speed data is not consistent with this code, as one can see by comparing the original unprocessed meteorological data to the processed data as used in the ISCST3 model. This comparison is shown in Table 1.

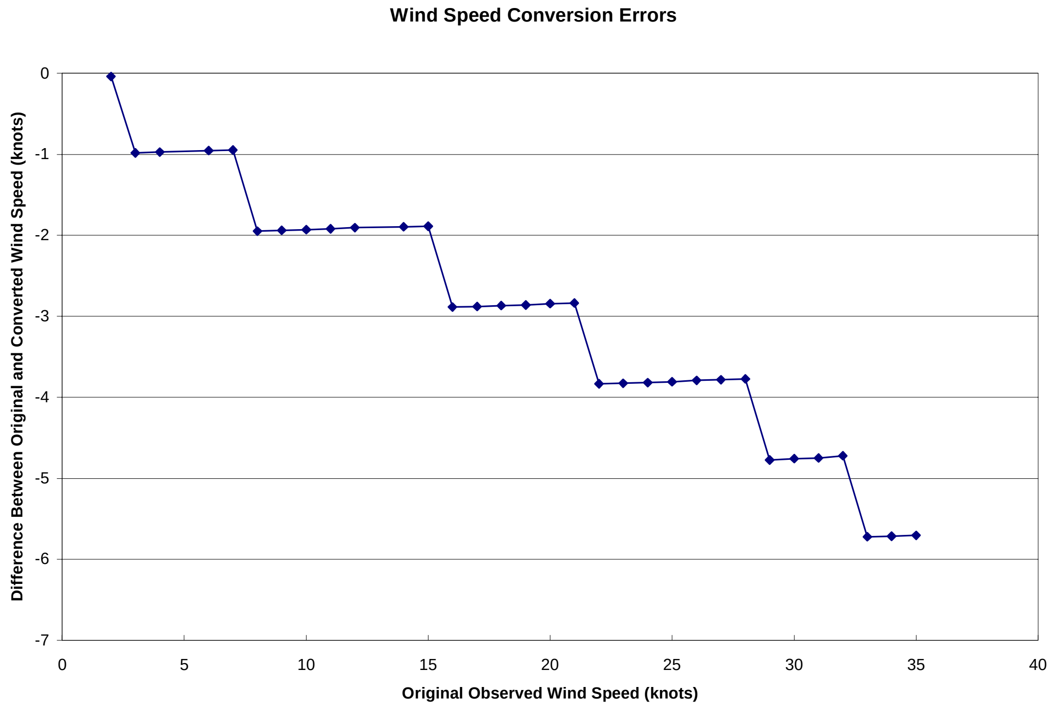
Table 1 Wind Speed Conversion from Knots to m/s

Date	*Hour*	*Wind Speed (knots)*	*Wind Speed (m/s)*	*Conversion Factor*
1/8/1995	6	2	1	0.5000
1/1/1995	9	3	1.03	0.3430
1/1/1995	3	4	1.54	0.3858
---	---	5	---	---
1/1/1995	1	6	2.57	0.4287
1/1/1995	6	7	3.09	0.4409
1/1/1995	12	8	3.09	0.3858
1/1/1995	15	9	3.60	0.4001
1/1/1995	14	10	4.12	0.4116
1/2/1995	12	11	4.63	0.4209
---	---	12	---	---
1/5/1995	1	13	5.66	0.4353
1/2/1995	11	14	6.17	0.4410
1/10/1995	11	15	6.69	0.4458
1/10/1995	12	16	6.69	0.4180
1/4/1995	21	17	7.20	0.4237
1/4/1995	19	18	7.72	0.4287
1/5/1995	21	19	8.23	0.4332
---	---	20	---	---

Clearly, the conversion factor should be the same regardless of wind speed. The peculiarity in the AFC's processed meteorological data seems to result from some sort of a "correction" factor that varies with wind speed as shown in Table 2, and graphically in the following figure.

Table 2 AFC's Wind Speed Correction Factors

Observed Wind Speed Range (kts)	Correction Factor (kts)
0-2	0
3-7	-1
8-15	-2
16-22	-3
23-30	-4
31-37	-5



When the correction factor is applied to the original wind speed observation, all of the AFC's processed wind speeds reflect the correct conversion factor from knots to m/s of 0.5444. It is unclear as to why the wind speeds have been altered prior to converting from knots to m/s, but it is clearly incorrect. Therefore, at a minimum, the meteorological data would need to be reprocessed to reflect observed conditions, as originally measured.

Erroneous Wind Speed Data

It appears that some of the modeling was conducted using an older version of the ISCST3 meteorological data files where there are some obvious wind speed errors. For example, the ozone limiting method (OLM) modeling for construction NO_2 flagged two wind speeds that are out of range as follows:

3/7/97 @ 1200	74 knots
3/17/99 @ 1500	102 knots

The wind speeds immediately adjacent to these hours are all less than 10 knots. These values were corrected in the most recent version of the processed ISCST3 meteorological data with the substitution of a calm wind speed (0 m/s), but some of the dispersion modeling used the erroneous meteorological data files. The substitution of a calm wind also contradicts the guidance that was supposedly followed in processing the meteorological data (i.e., Lee, 1992) which specifies averaging the four hours surrounding the missing value.

Temperature Data

At least one hourly temperature is incorrect in the meteorological database. The value in the database for 7/3/1999 at 1200 is a whopping 361.5 K, or 164.5°F. The project area can be quite warm, but not quite this hot. It is suggested that the applicant perform a QA/QC check on the data to make sure there aren't any other less obvious incorrect temperature values. This can easily be done using a simple trend analysis and flagging all values that exceed the expected hourly temperature change.

Upper Air/Mixing Height

The AFC utilized upper air data from Tucson, Arizona for use in the PCRAMMET model to calculate hourly mixing heights. While the availability of quality upper data may be limited, the data from Tucson is a very poor representation of mixing height for the project site.

Table 3 provides a comparison of mixing height observations from Tucson, Arizona and sites located at Thermal and El Centro, California. These data clearly indicate that the data from Tucson is not representative of the project site, especially in the early morning hours.

Table 3 Summary of Regional Mixing Height Data

	Morning Mixing Heights (meters AGL)				
	Winter	***Spring***	***Summer***	***Fall***	***Annual***
Tucson (Holzworth)	247	260	356	241	276
Tucson (soundings)	429	675	644	354	478
Thermal (soundings)	7	49	18	7	20
El Centro (soundings)	---	---	---	---	---
	Afternoon Mixing Heights (meters AGL)				
	Winter	***Spring***	***Summer***	***Fall***	***Annual***
Tucson (Holzworth)	1,424	2,664	3,110	2,110	2,327
Tucson (soundings)	1,870	2,742	3,344	2,404	2,527
Thermal (soundings)	---	---	---	---	---
El Centro (soundings)	1,362	1,403	606	1,192	1,160

The rather unique conditions of the project site, especially the location in a basin below sea level, render the data from Tucson rather meaningless. The project site also experiences a greater degree of influence from the semi-stationary North Pacific Subtropical High than is experienced in Tucson. This results in lower average mixing heights and stronger inversions, which are exacerbated by the elevation distribution of the Salton Sea Basin.

There is no simple solution for obtaining representative upper air meteorological data other than the implementation of an onsite meteorological monitoring station equipped with a Doppler Acoustic Profiler. In the absence of representative measured upper air data, the AFC should utilize boundary layer meteorological theory to model hourly mixing heights. There are numerous models and methods available that could be utilized to estimate hourly mixing heights, and validated against observed conditions at Thermal and El Centro.

Data Request

238. Please provide a listing of all missing meteorological parameters and the value that was substituted, interpolated or extrapolated to fill in the missing value. This listing should provide the rationale and method that was used for each missing value that was replaced.

239. Please provide a meteorological dataset that meets the minimum EPA requirements for dispersion modeling per the discussion provided above.

240. Please revise the dispersion modeling analysis to address using meteorological data that conforms to EPA guidance.

241. Please estimate hourly mixing heights using boundary layer meteorological theory and validate them against observed conditions at Thermal and El Centro.

Background

There are numerous stack parameters, mainly associated with construction and drilling equipment, that cannot be substantiated, and in some cases defy logic. For example, most construction and drilling equipment was modeled using a vertical stack, while it is likely that many of the stacks will be horizontal, or will contain rain caps or goose necks, which would substantially reduce the exit velocity. Also, exit velocities for some construction equipment exceeds 90 m/s, which is likely far greater than actual exhaust velocities.

Data Request

242. Please provide manufacture specifications and data to support all stack parameters and emissions used for construction and well drilling equipment.

Background

Non-criteria pollutant emissions have not been provided for all of the sources associated with project construction and operations. The AFC has estimated criteria pollutant emissions from numerous combustion sources, but has not provided non-criteria pollutant emission estimates for many of the sources. In addition, soils contain various metals and contaminants that can contribute to adverse health impacts following exposure to wind-blown dust.

Data Request

243. Please provide an estimate of non-criteria pollutant emissions for all construction equipment. For each emissions estimate, please identify the basis for that estimate.

244. Please provide an estimate of non-criteria pollutant emissions for all mobile emission sources (e.g., deliveries, commuting, etc.). For each emissions estimate, please identify the basis for that estimate.

245. Based on an analysis of soils at the site for metals, petroleum hydrocarbons, solvent and pesticide contamination, please provide an estimate of non-criteria pollutant emissions associated with fugitive dust emission sources. Please provide copies of all soils analyses for the site. For each emissions estimate, please identify the basis for that estimate.

246. Please provide non-criteria pollutant emissions for diesel engines (e.g., EG-480, EG-4160 & Fire Pump), and operation and

maintenance equipment. For each emissions estimate, please identify the basis for that estimate.

Background

There are several aspects associated with the construction modeling that have led to misleading and inaccurate construction modeling results. These problems have led to substantial underestimates in potential ground level pollutant concentrations.

First , the dispersion modeling utilized an elevated area source to simulate both mechanically generated and wind-blown fugitive dust emission sources (i.e., PM10). Using this approach, the sources, located at a height of 2 meters do not impact fenceline receptors since the initial vertical dispersion is not sufficient to allow the plume to reach ground level. This is clearly not an accurate simulation of emissions that are generated at ground level, or in some cases, below the level of surrounding berms. All ground-based emission sources should be simulated as either ground based area sources, or for cases where the emissions result from activities such as soil stockpiles or soil dropping from a backhoe, the source could be simulated using a ground-based volume source.

Mobile construction equipment was modeled as stationary point sources located at least a couple of hundred meters from the nearest property boundary and receptor. This is not an accurate representation of equipment that would traverse the entire site over a short period of time. Revised modeling should be conducted using a volume source approach encompassing the entire site. The initial volume source height can be determined based on source parameters (e.g., stack exit temperature, velocity, diameter) to estimate plume rise for each hour of the year utilizing the ISCST3 hourly emission (and stack parameter) function. Prior to preparing any revised modeling, the stack parameters would need to be justified using manufacturer data as noted in a previous data request.

The modeling also placed very strict limits on the hours of day when construction activities would take place. Typically, construction activities occur longer than an eight hour day. The AFC describes well drilling as taking place 24 hours per day for an average of 61 days per well. (AFC, pp. 3-37 and 5.1-12.) The modeling should either reflect a longer work day or a condition should be placed on the project to limit activities to the hours modeled.

Data Request

247. Please provide revised construction modeling results for PM10 utilizing either a ground-based area or volume source for all fugitive dust sources. If a volume source is used to simulate fugitive PM10 emissions, please justify the volume source height based on the sources that contribute to fugitive dust emissions (e.g., drop height, equipment height, etc.).

248. Please revise the construction dispersion modeling to reflect a 24 hour work day for drilling and wind-blown dust and other periods greater than 8 hrs, as appropriate, or indicate if the applicant is willing to accept a Condition of Certification (COC) limiting construction to eight hours per day, as used in the dispersion modeling analysis.

Background

The proposed project will represent a significant source of hydrogen sulfide (H_2S) emissions, even after control. The AFC does not provide any data on background H_2S, but instead states that data from the Niland monitoring station "…had extensive operating and quality control issues, such that H_2S monitoring had to be discontinued." Instead, the AFC proposed a background H_2S level of 24.6 μg/m^3, as recommended by the APCD. In the applicant's responses to CURE's data request number 47 for a reference and all data that supports this background H_2S level, the applicant stated that the background H_2S level was established "by information provided by Mr. Harry Dillon" of the Imperial APCD.

A review of monitoring data reveals that extensive H_2S monitoring was conducted in the region in 1977 with monitoring stations operated in Niland, Westmoreland, Brawley, Heber, Holtville and Imperial. These stations were all operated for most of 1977 to evaluate ambient H_2S levels in the Salton Sea Known Geothermal Area. Based on this study, it was determined that the California H_2S ambient standard of 0.03 ppm (42 μg/m^3) was exceeded at all of these sites, and on numerous occasions as shown in Table 4.

Table 4. Imperial County Hydrogen Sulfide Monitoring in 1977

Monitoring Station	*Maximum Observed H_2S (ppm)*	*# Days >State Standard (0.03 ppm)*	*Percent of Year Covered*
Niland	0.07	21	72
Westmoreland	0.09	8	77
Brawley	0.07	8	65
Heber	0.04	10	76
Holtville	0.03	2	80
Imperial	0.08	7	85

The AFC dismisses the Niland data, but does not provide any reason as to why the monitoring data from the other nearby monitoring stations should be excluded as well. This data indicates an existing problem with background levels of hydrogen sulfide, which should be investigated, not dismissed. In light of the background levels of H_2S, it would appear that the proposed project would contribute to existing violations of the California H_2S standard.

Data Request

249. Please provide all information provided by Mr. Harry Dillon of the Imperial County Air Pollution Control District for using 24.6 μg/m^3 as the maximum background H_2S level.

250. Please provide information on how the applicant proposes to demonstrate compliance with the California H_2S standard and not contribute to existing exceedances of the standard. This demonstration should be based on actual monitoring data and not hypothetical background levels.

251. Please indicate if the applicant would be willing to accept a COC requiring H_2S monitoring, as one possible mitigation measure to address this impact.

252. If the answer to Data Request # 251 is no, please justify your answer.

253. If the answer to Data Request # 251 is yes and H_2S monitoring shows violations of the state standard, please indicate if the applicant would be willing to accept a COC to reduce H_2S

emissions, as one possible mitigation measure to address this impact

254. Please explain why the Westmoreland, Brawley, Heber, Holtville and Imperial H2S data were not used to establish the H2S background for the site. Please provide all information that supports you answer.

Background

The AFC contains a fumigation modeling analysis and discusses the mechanics behind shoreline and inversion breakup fumigation. However, the AFC dismisses the potential for *shoreline* fumigation and declines to prepare a shoreline fumigation analysis. While the potential for shoreline fumigation is lower in general terms for average conditions, the AFC fails to address potential conditions that occur at the project site. For example, under northwest wind conditions an air mass would travel over the Salton Sea for a distance of more than 30 miles, which under low wind speed conditions allows more than ample time (over 10 hours for a 3 mph wind speed) to alter air mass characteristics and produce shoreline fumigation.

The AFC also states, without support, that the Salton Sea is not "…considered a cold mass of water." The AFC fails to recognize that the sea is frequently considerably cooler than the surrounding air mass. The applicant does not provide any quantitative measure of why shoreline fumigation could not occur, such as an analysis of air-sea temperature difference.

Also, the applicant's inversion breakup fumigation analysis did not consider worst-case conditions for the relationship between ambient and plume temperature. The applicant uses the warmest possible cooling tower plume temperature, and a default air temperature that is not representative of the site or worst-case conditions. By maximizing the difference between plume and air temperature, the greatest plume rise was attained, which artificially lowers fumigation impacts.

Data Request

255. Please provide modeling results for a shoreline fumigation scenario or quantitative justification as to why shoreline fumigation should not be considered at the project site.

256. Please provide a revised inversion breakup fumigation modeling analysis utilizing the worst-case combination of plume and air temperature (i.e., the minimum expected temperature difference).

Background

The cooling towers represent a significant source of pollutant emissions for the project. Dispersion modeling for the project was conducted using the EPA's ISCST3 model, which is not necessarily the best model available to simulate a source where latent heat loss in the plume substantially affects plume behavior. About 80 percent of the total energy leaving a cooling tower is latent heat.

The latent heat in a cooling tower plume results in more rapid cooling than would be experienced in a plume from a traditional combustion source for which the ISCST3 model was designed. This results in a lower plume rise and impacts closer to the source. In addition, cooling towers are significant sources of drift. Drift refers to the small droplets of liquid water released from the cooling tower. These drops contain salts and other potentially hazardous materials that can harm vegetation.

Data Request

257. Please provide a modeling analysis of cooling tower drift deposition around the project site. Modeling results should be presented in terms of deposition rates and/or totals for each constituent found in the cooling tower plume. The modeling should take into account the initial droplet size distribution and effects of latent heat loss on plume rise.

258. Please provide a droplet size distribution for the cooling tower drift downstream of the drift eliminators.

Background

A Class I visibility impact analysis was conducted for the project using the CALPUFF modeling system. Acid deposition and secondary pollutant impacts were also evaluated as part of this analysis. The Air Quality CD that was provided by the CEC did not contain all of the CALPUFF modeling files making it difficult to review the modeling analysis.

The meteorological data used in the analysis is different than the data used for the air quality analysis using ISCST3 and is probably not representative of the site or modeling domain. It may be more appropriate to evaluate meteorological data from a number of monitoring sites, using the most representative site for each parameter. For almost all parameters, data is available closer to the project site that would be far more representative of regional conditions than the data from Daggett/Barstow Airport and Desert Rock, Nevada (see the discussion for the previous data requests regarding the meteorological data used in the ISCST3 pollutant dispersion modeling analysis, as many of the comments on the suitability of the meteorological apply to this dataset as well).

Data Request

259. Please provide electronic copies of all input, output and meteorological data files used in the CALPUFF modeling analysis. For the meteorological data, please provide both the original and processed data files.

260. Please provide a listing of all missing meteorological parameters and the value that was substituted, interpolated or extrapolated to fill in the missing value. This listing should provide the rational and method that was used for each missing value that was replaced.

261. Please revise the meteorological data used for the modeling analysis and evaluate the suitability of each parameter.

262. Please provide an analysis that demonstrates the suitability of using meteorological data from Daggett/Barstow Airport for all meteorological parameters.

263. Please provide an analysis that demonstrates the suitability of using mixing heights from Desert Rock, Nevada as representative of the project site.

264. Please explain why a different met data set was used in the visibility analysis as compared to the ISC modeling.

PUBLIC HEALTH

Background

As discussed above, there are several problems with the meteorological data, emission source data, stack parameters, and dispersion modeling for the project (see the Air Quality data requests). These problems also permeate the health risk assessment that was prepared for the project, making the results unreliable.

The AFC notes that there are nine existing geothermal power plants within 3 miles of the SSU6 project and states that "[b]ecause there are no impacts above any of the health criteria during routine operations, no cumulative analysis need be considered." This statement is completely contrary to the intended purpose of preparing a cumulative impact assessment. While a single project may not result in a condition that results in unacceptable health impacts, the cumulative exposure to SSU6 and the nine other facilities may result in cumulatively significant health impacts.

Data Request

265. Please provide all dispersion model and ACE2588 model input and output files that were used to estimate potential health impacts associated with the construction, and commissioning and operation of the proposed project.

266. Since different versions of the meteorological dataset were used in the air quality modeling (one with and without wind speed errors), please provide the meteorological dataset that was used in the health risk assessment.

267. Given the clustering of geothermal projects in the Salton Sea Known Geothermal Area, please prepare a cumulative health risk assessment. The risk assessment should also include hazardous air pollutant emissions from all facility emission sources, not just those identified in the AFC (see CEC data request 53 through 56, as well as CURE's air quality data requests).

HAZARDOUS MATERIALS

Background

The AFC does not provide an analysis for facility-upset conditions upstream of the hydrogen sulfide control equipment or at the wellhead. Uncontrolled steam releases are not uncommon at geothermal power facilities, whether from emergency relief venting or equipment failure. These releases may contain high concentrations of H_2S and NH_3.

Data Request

268. Please provide steam composition data for potential release points within the facility.

269. Please prepare a Hazard and Operability (HAZOP) study for the proposed facility to identify potential release scenarios and facility failure modes. The HAZOP study can be based on preliminary facility design or on as-built drawings for a similar facility.

270. Please provide an analysis of accidental release scenarios for planned and unplanned geothermal steam venting, as well as an estimate of equipment failure rates for each component that could fail and release geothermal steam prior to or during H_2S removal. Please provide all justification for your analysis, including all data and release rates. Planned and unplanned steam venting rates should be based on industry observed rates and the operational performance of similar units. For equipment failure rates, industry specific component failure rates should be used where available. Otherwise, component failure rates from such sources as the American Institute of Chemical Engineers (AIChE), Center for Chemical Process Safety (CCPS) could be used, adjusted for the corrosive environment at this facility. It is suggested that scenario failure probabilities be estimated using Fault Tree Analysis (FTA) or some other similar technique.

VISUAL RESOURCES

Background

The applicant has prepared a modeling analysis of the cooling towers and other sources with potentially visible plumes. The applicant utilized the Electric Power Research Institute (EPRI) Seasonal/Annual Cooling Tower Impact (SACTI) model to predict cooling tower visible plume dimensions. As noted in the data requests for air quality, there are some substantial issues associated with the meteorological data that has been used in the air quality, public health and plume visual impact models.

Data Request

271. Please provide a copy of all SACTI modeling input and output files.

272. Please provide the specific meteorological dataset that was used in the SACTI modeling, including both original and processed data, a listing of interpolated, extrapolated and missing data, and all assumptions made regarding the additional data (e.g., dew point temperature) required for SACTI modeling.

273. Given the problems with the meteorological dataset used in the modeling analysis, including the poor correlation of mixing height data to the project site, please provide a revised visual plume modeling analysis utilizing the corrected (or soon to be corrected) meteorological dataset.

WATER RESOURCES

Background

On December 9, 2002, the Board of Directors of the Imperial Irrigation District ("IID") rejected the Quantification Settlement Agreement ("agreement"), a series of water conservation projects and water rights agreements under which California will agree with six other Western States to reduce its use of Colorado River water to 4.4 million acre feet (MAF)/year over the next 15 years ("4.4 Plan"). A key component of the agreement is the proposed water transfer from IID to San Diego County. Currently, without this agreement, there is no plan.

Unless some version of this agreement is subsequently executed, California's use of Colorado River water would immediately be cut to 4.4 MAF/year. In fact, the Secretary of the Interior announced on December 16 that this cut will be in effect as of December 31, 2002. California stands to lose about 700,000 acre-feet of water from the Colorado River next year. The Metropolitan Water District (MWD), the South Coast's water wholesaler, would lose this water, because their priority for Colorado River water is lower than that of other California users, including IID. MWD is the primary source of water for the San Diego County Water Authority.

It is possible that a revised agreement could be executed soon. In the short term, MWD claims to have enough water from other sources to make up for the loss of water from the Colorado River for the next two years, if such loss occurs. In the longer term, the failure of this agreement and the 4.4 Plan raises threats to IID's water supply. Five options have been mentioned:

- The agreement rejected by IID could be renegotiated and ratified by IID. This would, presumably, reinstate the 4.4 Plan and give California until 2017 to reduce its use of Colorado River water to 4.4 MAF/year.

- Department of Interior could unilaterally reduce IID's allocation. This reduction would be justified by a claim that IID's use of some of its water was not reasonable. Presumably, if the reduction is at least equal to the amount of water in the rejected agreement, the 4.4 Plan would be reinstated.

- The State Water Resources Control Board could find IID's use of water wasteful and unreasonable and could prescribe a reduction in that use. Again, presumably, if the reduction is at least equal to the amount of water in the rejected agreement, the 4.4 Plan would be reinstated.

- The California legislature could change the powers of IID or otherwise restructure the district to make ratification of the agreement more likely.

- MWD could develop other sources of water, including conservation, desalting, and purchases from agriculture that, although expensive, would essentially replace the water that would have come from IID.

Some insight into the possible long-term effects on IID might be gained by considering the effects on agricultural water districts on the "West Side" of the San Joaquin Valley. These districts, including the Westlands Water District, have been dealing with issues surrounding their water use for years. During this time, environmentalists and others have portrayed the agricultural districts, especially Westlands, as water-wasting recipients of heavily subsidized (i.e., cheap) water and large federal crop subsidies and producers of dangerous agricultural drainage. After years of such characterizations, it was widely believed that West Side agriculture did not deserve the water it had been getting from the federal government.

In 1992, the Central Valley Project Improvement Act, signed into law by President George Bush, cut the West Side's water supply by several hundred thousand acre-feet. This was followed by further cuts to protect threatened and endangered fish in the Sacramento-San Joaquin Delta. No one, besides the West Side farmers and local communities, objected. Westlands is now planning to fallow 200,000 acres, one third of its irrigated land, because of reduced water supplies. This pattern of characterization of IID has already started.

Data Request

274. In light of the current uncertainty about IID's future and future water supply, please evaluate the effect of each of the above outcomes on the project's water supply and operation of the project.

Background

The Water Supply Agreement indicates that the Project can exercise options to make one time payments to IID to convert payment for some water from IID's conservation rates to IID's industrial use rates. If the Project chooses to make these payments, IID would presumably use the funds to implement water conservation projects, transferring the saved water to the Project at the industrial use rates. Conservation of water by IID would typically reduce flows from IID to the Salton Sea.

Data Request

275. Please evaluate the environmental effects, including effects on the Salton Sea, of the Project's exercise of its options to make one-time payments to IID for portions of its water supply.